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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/807,136

03/24/2004

Yutaka Tanaka

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04/18/2007

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EXAMINER

ABOAGYE, MICHAEL

ART UNIT

PAPER NUMBER

1725

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

04/18/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/807,136

Applicant(s)

TANAKA ET AL.

Examiner

Michael Aboagye

Art Unit

1725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-9 is/are pending in the application.
- 4a) Of the above claim(s) 1 and 2 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03/24/2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 3-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3 recites the limitation "to draw a curve on their seam with the curved edge of the extension of the outer frame member". It is unclear what the applicant intend to convey; therefore the claims are vague and indefinite.

Claim 3 also recites the limitations: "Their seam" and "the curved edge" on lines 10. There is insufficient antecedent for these limitations in claim 3.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 3,4,8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA (applicant's admitted prior art) in view of Dracup et al. (US Patent No. 6,779,707).

AAPA shows a method for fabricating a frame by providing an elongated and curved shaped outer frame member of T-shaped section having an extension of extending inwardly; providing an elongated and curved shaped inner frame member in accordance with the shape of the longitudinal direction of the outer frame member, said inner member having a flat portion abutting against the extension of the outer frame member, and joining the outer frame member and the inner frame member by riveting/fastening; wherein the line of joint connecting the inner and the outer members forms a curve shape (Applicant's specification, page 1, line 17- page 2, line 8, figures (9A&B)). AAPA shows an inner frame member with cutaway holes (the holes corresponding to feature 108) and also has an L-shaped section (AAPA, figures (9(A&B))).

AAPA does not expressly teach welding by the members by friction stir welding.

However Dracup et al. teaches a method of joining an aircraft structural parts by using friction stir instead of riveting in view of the fact that friction stir welding is a more viable and cost reducing alternative to riveting (Dracup et al., abstract, column 1, line 65-column 2, line 14 and figures 5-9). It would have been obvious to one of ordinary skill in the art at the time the applicants invention was made to have used friction welding in the method of AAPA for joining the members as taught Dracup et al. since friction stir welding is a more viable and cost reducing alternative to riveting (Dracup et al., column 1, line 65-column 2, line 14).

5. Claims 3-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over (US Patent No. 6,591,499) in view of Garret et al. (US PUB. No. 2003/0226935)

Lundgren discloses a method for fabricating a frame by providing an elongated and curved shaped first frame member of T-shaped section having an extension of extending inwardly (abstract, column 4, lines 16-20); providing an elongated and curved shaped second frame member matching the shape of outer frame member along the longitudinal stretch of the latter, said second member having a flat portion abutting against the extension of the first frame member, and joining the first frame member and the second frame members by laser welding; wherein the line of joint connecting the two members forms a curve shape (abstract, column 4, lines 15-41 and figures 1 and 2) (Note the figure 2 depicts a section construed as rectangular, however the actual structure in figure 1 shows a curvy or bell-shaped nozzle).

Lundgren does not expressly teach friction stir neither welding nor surface treatment.

However Garret et al. teaches a method of joining member elements of aircraft structural parts such by welding processes such as friction stir welding, laser welding (Garret et al., abstract, paragraphs [0009], [0016], [0061] and [0109] and figure 1). Garret et al. teaches a surface treatment technique such as anodizing to improve the surface finish of the product and also enhance corrosion resistance of the structural member (Garret et al. [0027]). It would have been obvious to one of ordinary skill in the art at the time the applicants invention was made to have used friction welding in the

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method Lundgren as taught by Garret et al., since friction stir welding and laser welding are obvious welding alternatives known in the art (Garret et al. [0027]).

Response to Arguments

6. The examiner acknowledges the applicants' amendment received by USPTO on December 28, 2006. Claims 1 and 2 have been withdrawn, new claims 7-9 have been added, therefore claims 3-9 are currently under consideration in the application.

7. Applicant's arguments with respect to claims 3-6 have considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

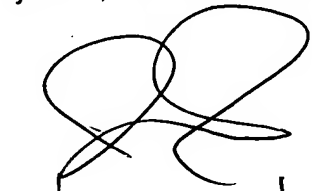
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Aboagye whose telephone number is 571-272-8165. The examiner can normally be reached on Mon - Fri 8:30am - 5pm.

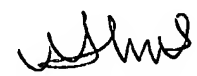
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AM
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Jonathan Johnson
Primary Examiner


Michael Aboagye
Assistant Examiner
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04/13/2007